

4.23 Capping Fill System

Revision: ~~June 5, 2014~~July 22, 2015

4.23.1 Description

A capping fill trench is a drainfield constructed so that its bottom is at least 3 inches into the natural soil but less than 2 feet deep in the natural soil. A selected fill material caps the trench to provide cover. The two subcategories of a capping fill system are (1) ~~standard~~below-grade capping fill system and (2) ~~extreme~~above-grade capping fill system. Capping fill systems may be installed by any installer with a basic installer's permit unless a complex component is used in conjunction with the capping fill system design.

4.23.2 ~~Standard~~Below-Grade Capping Fill System

A ~~standard~~below-grade capping fill system is constructed so the bottom of the drainfield is less than 24 inches deep in the natural soil but deep enough in the natural soil to keep the ~~invert of the drainfield pipe~~entire drainfield below the natural soil. The installation depth is ~~between 12-24 inches below the natural soil~~deeper than 6 inches for a standard drainrock and perforated pipe drainfield. The bottom depth of the drainfield necessary to keep the ~~invert of the drainfield pipe~~ below the natural soil may be deeper for gravelless system products or combination extra drainrock and standard capping fill systems. See Figure 4-1.

~~Standard~~Below-Grade Capping Fill System Approval Conditions

1. Effective soil depths below the drainfield bottom must be met as required by IDAPA 58.01.03 or as allowed in section 2.2 of this manual following the separation distance hierarchy.
- ~~2. Site may not exceed 12% slope if the drainfield extends above natural soil.~~
- ~~3. If the drainfield is at or below natural soil, the s~~Site may not exceed 20% slope.
- ~~4. The soil cap may be constructed prior to system excavation but after natural soil scarification if the drainfield extends above the natural soil~~cap must extend above the natural soil to achieve the minimum cover requirement of 12 inches.
- ~~4. The fill material (section 4.3.4), construction (section 4.3.5), and inspection (section 4.3.6) requirements must be met.~~

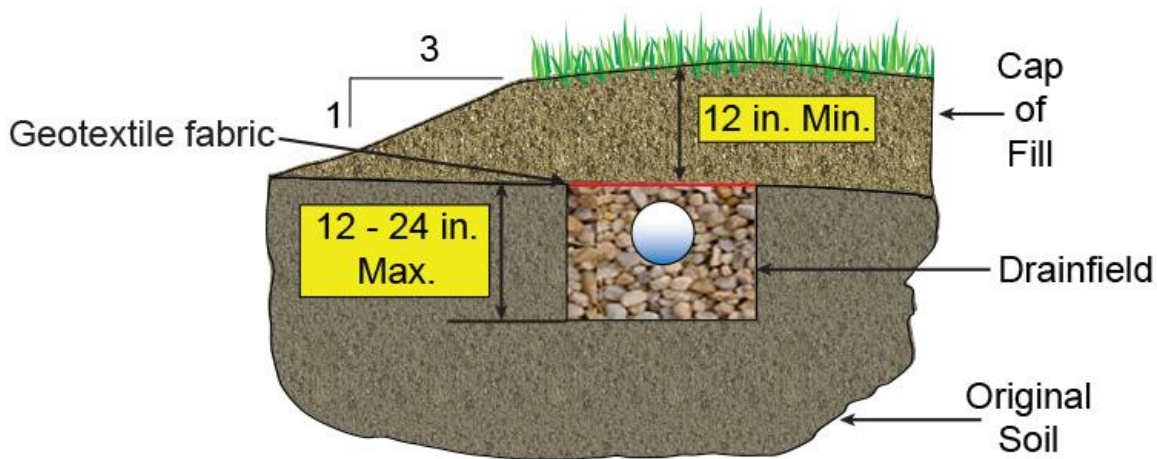


Figure 4-1. Cross-sectional view of a below-grade capping fill trench.

4.23.3 ExtremeAbove-Grade Capping Fill System

An extremeabove-grade capping fill system is constructed so that the invert of the upper portion of the drainfield pipe is above the natural soil. The is drainfield installation depth is typically less than 12 inches deep or less for a standard drainrock and perforated pipe drainfield. The bottom depth of the drainfield that results in the invert of the upper portion of the drainfield pipe being above the natural soil may be deeper for gravelless system products or combination extra drainrock and capping fill systems. See Figure 4-2.

ExtremeAbove-Grade Capping Fill System Approval Conditions

1. Effective soil depth below the drainfield bottom must be met as required by IDAPA 58.01.03 or as allowed in section 2.2 of this manual following the separation distance hierarchy.
2. Site may not exceed 12% slope.
3. The soil cap may must be constructed prior to system excavation but after natural soil scarification when constructing with pipe and aggregate.
4. The soil cap shall be compacted to 90% of the existing soils, which shall be verified by a soil compaction test after cap construction extend at least 10 feet beyond the nearest trench sidewall in all directions.
5. The invert of the perforated distribution pipe in a combination extra drainrock and extremeabove-grade capping fill system shall not extend more than 3 inches above the natural soil.
6. The bottom of the drainfield shall be installed no shallower than 3 inches below the natural soil.
7. The minimum cover over the drainfield shall be 18 inches.
8. The fill material (section 4.3.4), construction (section 4.3.5), and inspection (section 4.3.6) requirements must be met.

65. Finished side slopes of the fill are to be evenly graded from the outer edges of the trenches to the natural soil surface with a [maximum](#) slope of 3:1 or less (three horizontal to one vertical).
76. Compaction of the scarified area must be prevented. Use of equipment with pneumatic tires is prohibited on the [scarified area and](#) fill or cover.
87. At least 12 inches of fill must be applied to cover the trenches [in a below-grade capping fill system and 18 inches of fill must be applied to cover the trenches in an above-grade capping fill system](#).

4.23.6 Inspections

1. Site soil texture, fill soil texture, and the scarification or vegetative mat disruption process will be inspected by the Director.
2. Installed trenches will be inspected by the Director prior to cover.
3. Final inspection after covering may be conducted by the Director to ensure proper cap placement and slope.

~~Figure 4-1 shows a cross section of a capping fill trench.~~